

# DRAFT NOTES

## **DOD FUEL FACILITIES ENGINEERING PANEL MEETING**

**7 AUG 02**

**FT. BELVOIR, VA**

### 1. CHARTER:

Primary mission is to standardize POL Facilities requirements across the services where possible. Ensure technical transfer of lessons learned. (What works and what does not)

Note that while there are 4 voting members the panel will resolve issues in a 4:0 vs 3:1 format. Looking to the common good for the operations community.

Charter needs some pen and ink changes:

- a) When referencing 1022 ensure that the reference is the same throughout the document.
- b) Do not include reference to DM-22

There was concern with the term “operation” as stated in the Charter. Must ensure all parties realize that “operation” refers to maintenance of facilities and not how to fill (i.e. aircraft, vehicles)

Consider inviting Coast Guard to sit in on future meetings.

Include the FFEP Charter as an appendix in future 1022 version.  
1022 will be converted into a UFC in FY03.

Need clarification of “Substantial Deviations”

- a) Different technologies occur faster than Mil Handbooks are updated.
- b) Facilities are at different ages. Does it make sense to go and make changes to a system that is working safely because the new handbook differs from what is currently in field?
- c) What is the difference between Substantial Deviation and a tweak in the design?
- d) Commands tend to have modifications/requirements unique to the equipment being serviced.
- e) There are no unified commercial standards to draw from. (Within a year there should be one for truck stands.)

Proposed goal is that the basic platform/design is accepted across the services and unique service requirements be added to the basic. The service requirements would be in the form of “tweaks” and not constitute a “Substantial Deviation”.

### 2. ENGINEERING STANDARDS DEVELOPMENT:

- a) AST COMPLETION: On hold at 35%. South Div’s contractor is evaluating commercial vs military tank requirements. Air Force would

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like to continue based upon the 35% design criteria that they currently have.

Conflict between DESC wanting API 650 standards, and Services having additional requirements.

Currently there are three versions of tankage requirements (Army, Navy & Air Force). There is no money for maintenance of Services' specific designs & specifications.

South Div proposed that in the future there be a "Performance Spec" which would be a basis for design to give to an A&E. Add the details for service components.

Need to explore the best delivery method /vehicle to get information to contractors and to update specs and designs.

PACAF reiterated that fuel projects and requirements are different than normal (buildings and houses) projects. It requires knowledgeable personnel in the decision process and in the oversight of the contract.

PACAF stated that work outside of CONUS is challenging. Projects funded or partially funded by a foreign government will run into problems without a standard design. Dealing with foreign contractors is easier if there is a DOD/US Government standard design for both parties to look at and work from.

There needs to be more attention to keeping "standard design" up to date. Should also consider title change to "Performance Specification".

**\*\*\*ACTION ITEM: Need to actively collect feed back and problems with existing standard design and available information (i.e. 1022)\*\*\***

DESC –(Henry Gorin)- Need to establish what the Government needs for AST/fuel system. What is practical with respect to what is required in the commercial sector? What is the justification for requirements that differ from API 650?

Want to ensure that the reason (with documentation) for requirement is necessary and not because it caters to a personal preference.

- b) CUT AND COVER TANKS: This relates primarily to CONUS and western Pacific. NATO already has a standardize for their AOR.

PAC AF-(Sanford Oda)- A standard DOD design is desirable to be able to hand to a non-US company for design/construction.

Sizes of 10,000 bbls, 25,000 bbls and 100,000 bbls are required.

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PAC AF would like to see the results of a Burns and McDonnell FY03 project (sometime early next year) for possible “piggy back” into standard 100,000 bbl design.

10,000 bbl design should be done end of SEP 02 (Pope AFB)

Carl Drechsel has a 25,000 bbl tank design ready for review.

All these are per Air Force specification.

? **? Will need to review for Navy / Army compatibility.**

c) TYPE III & IV:

Jimmy Brasch stated that there were to be minor changes to the Type III.

Pat Mumme suggested that the Type III and IV updates/upgrades be rolled into one effort.

? **\*\*\*The five Air Forces will need to identify their needs in 30 days and forward to Pat Mumme for consolidation. Information is to be forwarded to Jimmy Brasch, Terri Regin, and Jim Hugar. They will then be forwarded to John Russell.\*\*\***

- d) MILITARY SERVICE STATIONS / OFF LOADING FACILITIES/  
GROUND PRODUCTS: Air Force wants an Engineered Standard Design. Sanford Oda – standardization helps in training doctrine, DESC evaluation of proposal and privatization efforts.  
There should be criteria agreed upon for Standard design.

## SERVICE STATIONS -

The contractor operated / built service stations tend to be smaller than the ones identified in the 1022. Adherence to NFPA 30/30a is not always addressed in current station designs.

There should be a definitive design that can then have site-specific requirements added.

? **\*\*\*The Navy/Army are currently developing the UFGS for Gas Stations. When completed, will forward to Pat Mumme for Air Force comments.\*\*\***

## OFFLOADING FACILITIES-

South Div contractor did analysis for each type of system for truck off loading facilities. Need standard designs for Off Loading facilities.

R11 tankers have had fractures occur due to slope of ramps. Need definitive design to address this issue.(Air Force)

Current information is 1022 is probably sufficient for fill stand requirements.

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Fuel Pier design specification/standards: South Div has a definitive design for fuel piers based upon the "T" pier in Jacksonville, Florida. This design includes stripper pumps and expansion joints.

Candidates for standard designs for offloading are:

- a) Pipeline
- b) Truck
- c) Rail
- d) Barge

Filtration requirements and where to locate filters should be revisited and addressed in new version of 1022.

3. ADOPTION OF NAVY SPECIFICATIONS FOR TRI-SERVICE USE: Navy and Army specs are currently being converted to UFGS. Plan is to have three specifications vs the current seven.

New:

- a) Industrial POL system
- b) Gasoline / Diesel dispensing
- c) ?

The goal is to get this into tri-service agreement. The specifications will be developed and then forwarded to the Air Force for review and comment. While the current specs are not applicable for Type III the idea is to make them not conflict.

\*\*\* Goal of Panel is to combine criteria and smooth differences\*\*\*

4. AFI 32-1275 – AIR FORCE MAINTENANCE POL FACILITY: There should be a tri-service maintenance document. It must be tri-service to get any funding from DESC.

The Air Force does not believe they will publish the current document that is being worked on.

The various services have differing philosophies on maintenance which will any new document will need to acknowledge. Maintenance will gain in importance as systems become more automated. As unformed service members move to tactical roles there will be more contractor-operated facilities.

Tri-Service Document will need to be an OVERALL Maintenance Guidance plan addressing the common ground between the services.

Commercial operators conduct predictive / preventative maintenance.

Three types of maintenance:

- 1. Scheduled – based upon run time or calendar date.
- 2. Conditional – fixed when fails.
- 3. Predictive – fixed before failure.

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Must always remember that MISSION requirements must take precedence over LIFE CYCLE considerations. Remember why the system is there and the ultimate purpose.

Tactical requirements and issues are different than those governing fixed facilities.

## **\*\*\*SIDE PANEL TO DEVELOP SOW**

*Pat Mumme*

*John Cummings*

*Jim Hugar*

*Jim Lucas*

*Bill Pierce\*\*\**

5. PRESSURE TESTING PROCEDURES: Instruction is to test to 1.5 times normal operating pressure.  
New maintenance manual will include guidance.
6. MIL HANDBOOK 1022: Will be converted to UFC in FY03.  
What additional information needs to be included?  
The preamble should be changed to remove confusion of new construction vs rehabilitation.

DESC will not fund retrofit just because 1022 recommends it. However if the retrofit makes sense then it will be funded. Use of common sense is required. DESC will review on a case-by-case base.

? ?\*\*\*Send 1022 comments/corrections to your panel head who will forward it to Terri Regin.\*\*\*

7. TYPE IV PRESSURE REDUCTION ISSUE: Be advised when fueling F-16s there should be no more than 30 psi at the nozzle. This situation should be cleared up soon and will not effect Type IV design.

## OPEN TOPICS -

8. DESIGN BUILD: Sanford believes this is a risk management issue and does not want this process used with POL.  
Dave Warren felt that it is a good tool to use and should be considered.  
Tom Barba (DLA) does want design/build used for POL MILCON projects. He has to justify the costs to OSD and they do not accept parametric cost estimates, only engineering estimates developed from a design.  
The new 1022 should include RFP & IFB procedures with standard source selection criteria.
9. FORMAL ADOPTION OF FFEP CHARTER will be handled by inclusion in the new 1022 as an appendix.

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10. PETRO 2003: March 9-13, 03 in San Antonio, TX Pat Mumme is a POC
11. ACE has a facilities conference May 03
12. ROTARY WING HOT REFUEL DESIGN: (Jim Hugar) Army has had two out of five projects produce less than acceptable results. Part of the reason is lack of standard design.

Navy has not had same record while using an older design. Navy has POL contract at each of its engineering field divisions.

13. POST 911 FORCE / RESOURCE PROTECTION REGULATIONS: Primarily an Air Force issue but is there anything that can be done to define requirements that might mitigate follow on fixes?  
Group agreed that a mention of force protection being a consideration and a requirement be included in the new 1022. The person preparing the 1391 needs to take the responsibility to look and address the vulnerability risk assessment.  
**(NOTE: Is paragraph 2.11 sufficient?)**

14. E85 ALTERNATE FUEL ISSUES: Methane based fuel should be OK in existing designs.  
Bio-diesel may require some changes (ie: cleaning before use)  
DESC will not buy new tank for fuel. DESC wants to encourage base to use existing storage. Wants to have criteria for base to support E85.  
Panel will work off commercial standards when they become available.
15. FUEL FACILITY RE-CAPITALIZATION FROM OSD: Between 04 and 09 there will be \$365 million additional available. Need more MILCON submissions.  
Older facilities are good candidates.  
An inventory of what is out there and their conditions would be helpful.

## PRIORITY/LEAD OF TASKS

1. Maintenance Manual – Pat Mumme/John Cummings/Jim Hugar/Jim Lucas/Bill Pierce
2. MIL-HNBK-1022 - comments to Terri Regin by 30SEP02
3. AST Standard-fixed – John Russell/Henry Gorin/Pat Mumme
4. Consolidation of Army/Navy – Dale Otterness/Terri Regin
5. Type III & IV – Jimmy Brasch/Pat Mumme 30SEP02
6. Pipe/Rail Off Load Facilities Guidance – Dave Warren/Terri Regin
7. Military Service Station – Terri Regin/Jim Hugar
8. Cut and Cover Tanks Designs – Jimmy Brasch/Sanford Oda